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Science and Engineering Research Canada

Contact

Investing in people, discovery and innovation

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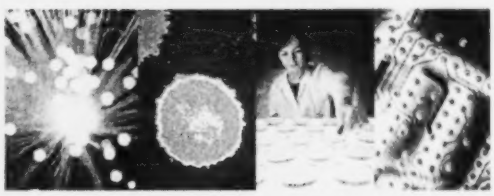

NSERC
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Some Additional Support

Editorial by NSERC President Tom Brzustowski

Budget 2005 was presented on February 23, and the news for university research in science and engineering was good, but not great.

The possible cut of 5 per cent, which I had mentioned in the January 2005 issue of *Contact*, did not happen. On the contrary, there was a budget increase introduced with some very positive language that is worth quoting in full ("The Budget Plan 2005," pp. 129-130):

> "Recognized excellence in science is crucial to ensuring Canada's strong innovation performance and ongoing competitiveness in the global economy. The three federal granting councils … are key supporters of research in Canada, championing research excellence, promoting the recruitment and training of talented researchers, and increasingly taking on an important role in strengthening Canada's commercialization environment."

The actual financial announcement reads as follows:

> "Since 1998, the Government of Canada has allocated significant new resources each year to the granting councils. The combined base budgets of the three councils now stand at $1.5 billion, double their level in 1997-98. To maintain this momentum, Budget 2005 will increase the annual budgets of the three granting councils by an additional $75 million per year, starting in 2005-06. These incremental funds will be allocated as follows: $32 million each for CIHR and NSERC, and $11 million for SSHRC. This funding will enable the councils to enhance their support for new and promising researchers, and to sustain their overall support for research in Canada."

That's a most welcome nominal 5 per cent increase to the granting councils. In addition, the support for the indirect costs of research will rise by $15 million per year, to $260 million per year in 2005-06. The budget also provided renewed funding for TRIUMF, for Genome Canada, and for Precarn. Notably, Budget 2005 also funded the new Canadian Academies of Science, launching an important scientific institution that Canada has long needed. A sum of $30 million is being provided to support the operations of the CAS for the next ten years.

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Natural Sciences and Engineering Research Council of Canada
Conseil de recherches en sciences naturelles et en génie du Canada

Canada

NSERC, now also known as Science and Engineering Research Canada, is a key federal agency investing in people, discovery, and innovation. It supports both basic university research through research grants, and project research through partnerships among postsecondary institutions, government and the private sector, as well as the advanced training of highly qualified people.

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Continued from cover page

Unfortunately, the story does not end there. Budget 2005 was silent on the earlier decision to cut the NSERC budget permanently, as part of the so-called "$1 billion exercise" launched in 2003. So far, NSERC has been able to meet its target cut by turning back money that had been allocated to the Canada Research Chairs program but could not be spent because appointments were not being made as fast as had been expected. But in 2005-06, the "$1 billion exercise" will cut into our base budget by $10.2 million relative to 2004-05, in 2006-07 by $15.8 million relative to the same year (i.e., an additional cut of $5.6 million), and in 2007-08 and beyond by $16.2 million.

That means that the effective budget increase for 2005-06 is not $32 million per year, but only $21.8 million. And that, in turn, means that next year we will have to deal with the growth in first-time applicants for Discovery Grants just as we have in the past, and that it will be impossible to relieve any other budget pressures.

But for the long-term future of government support for university research in science and engineering, the very positive language in the budget speech may prove more important than this year's numbers.

An Invitation to Comment on a National Framework for "Big Science" Projects

In February, NSERC President Tom Brzustowski issued a letter inviting the NSERC research community to comment on a draft discussion paper entitled "A Framework for the Evaluation, Funding and Oversight of Canadian Major Science Investments." The consultation is being led by Dr. Arthur Carty in his capacity as National Science Advisor.

The federal government currently does not have a formal framework to evaluate and fund "big science" projects, even though they cost hundreds of millions of dollars to build and operate. Developing a framework to address this gap has been a key issue for NSERC and the research community, since large-scale science projects and facilities have become more complex and costly, and their scope has become more interdisciplinary and international.

The draft discussion paper outlines a framework for making systematic, transparent, strategically-based decisions about federal investments in major science projects and facilities, and overseeing the management of the initiative once funding has been approved.

The deadline for comments is **May 15, 2005**. They should be sent directly to the Office of the National Science Advisor at scienceinfo@pco-bcp.gc.ca (fax: (613) 948-6667).

To view the document and the letter inviting comments, visit www.nserc.gc.ca/about/initiatives/comment_e.htm.

"Big science" is part of NSERC's New Initiatives, along with regional research capacity building, helping community colleges promote innovation in communities, helping to improve math and science education, and opening regional offices.

Call for Nominations

	Deadlines
NSERC Herzberg Medal	April 15
Innovation Challenge Awards	May 16
Brockhouse Canada Prize	April 15
Synergy Awards for Innovation	May 31
E.W.R. Steacie Memorial Fellowships	July 4

www.nserc.gc.ca/about/prizes_e.asp

Engineering Design at Sherbrooke: A Genius for Practical Innovation

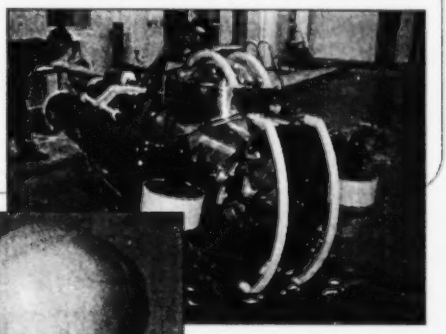
Ever hear the one about a graduating engineer who knows the theory of a product or process but has no idea how to design it? There's a move afoot by NSERC and others to increase the design competence of engineers trained at Canadian universities. We are supporting this move through two programs: the Chairs in Design Engineering and Chairs in Environmental Design Engineering programs, as well as through assistance to the Canadian Design Engineering Network (C-DEN).

Key to the success of the initiative is the commitment of individuals like François Charron, the NSERC Chair in Design Engineering at the Université de Sherbrooke since 2001. Professor Charron has played a leading role in the revolution in Sherbrooke's undergraduate engineering training. He brought to the table more than a dozen years of industrial experience – including nine years at Spar Aerospace culminating as the manager of the Mechanical Engineering Department, as well as practical experience with innovation and commercialization as the head of Technovadev Inc.

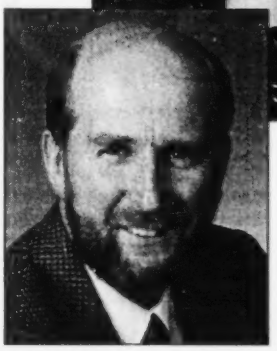
In 1996, Sherbrooke's Department of Mechanical Engineering introduced a substantially revised curriculum for undergraduate students. Central to this curriculum are integration projects that span each of the four first terms and a major design project that spans the last four terms.

For example, in the first year the students might be doing the conceptual design of a chair lift at a mountain ski resort, while in the third and fourth years the students might be doing the complete design (from the idea to a fully functional prototype) of a submarine or a solar collector for water heating. The students work in teams that range from five to 15 people. One group of nine students created an Unmanned Autonomous Vehicle with the support of Defense R&D Valcartier (from the idea to a fully functional prototype). Partner contact Éric Fournier was very impressed that the students not only designed and modelled a complete UAV, but delivered a functional prototype that he saw fly.

The second annual C-DEN conference is planned for July 18-20, 2005, at Kananaskis, Alberta. It follows on the heels of the first, very successful, C-DEN conference, which brought together design educators and practitioners.



Single-seat pocket submarine



François Charron

As students move through their undergraduate training, the projects are more and more open-ended, aligning with the reality that the students will experience upon graduation. "This continuous contact with design problems gives students a practical frame of reference for the concepts they are learning," says professor Charron. "At the same time, it introduces the engineering design process and builds the important 'soft' skills needed by tomorrow's engineers. The major design project also allows the students to be part of a team like in the real world – a first complete design experience."

Students have been enthusiastic about the experience. Jean-Sebastien Plante (currently doing a doctorate in design at MIT) had two years of the old curriculum and two years of a pilot version of the new curriculum during his Bachelor's in Engineering. "The new curriculum showed me that engineering design was where I wanted to be. The inclusion of integration projects with the more standard analytic courses gave practical meaning to the analytic courses we need to apply theoretical concepts to our projects," said Mr. Plante. Without this integrated approach, students must participate in the extra-curricular design competitions to get part of the same experience (e.g., SolarQuest, or Mini Baja®).

As François Gitzhofer of Sherbrooke's Department of Chemical Engineering puts it, Professor Charron "is a cornerstone here." He further notes that the chair's resources are very important for the success of the students and their design projects. Other departments in the Faculty of Engineering at Sherbrooke are now adopting some of the concepts developed in Mechanical Engineering or exploring how they can improve the level of engineering design in their department.

Companies involved in major design projects with the University include Bombardier (BRP) Recreational Products, Bombardier Aerospace, Pratt and Whitney Canada, Soucy International, Terre Sans Frontières, Physipro, Amecci, Recherche et développement pour la défense Canada - Valcartier (RDDC), Agence Spatiale Canadienne, and Premier Tech.

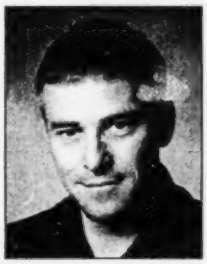
Winners of NSERC's 2005 Prizes Announced

The 2005 winners of some of Canada's most prestigious research prizes, the NSERC Steacie Fellowships, Howard Alper Postdoctoral Prize, and Doctoral Prizes, were recently announced. The prizes will be presented at a ceremony later this year.

The researchers and their achievements are featured on our Web site at www.nserc.gc.ca/news/news_rel_e.htm; below are some of the highlights of their work. Visit www.nserc.gc.ca/about/prizes_e.asp for information on the prizes.

NSERC Steacie Fellows

Dr. Michael Doebeli
Evolutionary Biologist
University of British Columbia



Michael Doebeli

Dr. Doebeli is using mathematics to increase our understanding of the fundamental evolutionary process of speciation. In a landmark 1999 *Nature* paper, he and colleague Ulf Dieckmann provided a theoretical framework for sympatric ("same place") speciation. They demonstrated that ecological forces such as competition for food can lead to speciation without physical separation. In 2004, his lab used *E. coli* to support this theory experimentally.

While a Steacie Fellow, he plans to extend his research on the evolution of cooperation, the topic of his recent theoretical paper in *Science*. He'll use microorganisms, such as yeast, to test whether when producing a common good, such as an enzyme, populations can diversify so that some individuals make large contributions to the common good, while others freeload on this public resource.

Dr. Neil Branda
Organic Materials Chemist
Simon Fraser University

Dr. Branda's research has focused on creating "switchable" organic molecules for materials science applications in digital data storage, communications, and sensing. His lab has developed some of the world's first photoswitches that could use fluorescence to read optical data in a non-destructive way.

Neil Branda

During his NSERC Steacie Fellowship Dr. Branda will explore using switchable molecular structures for medical applications. He will also collaborate with health sciences researchers to investigate new methods of drug delivery and activation for treating diseases such as cancer.

Dr. Branda is also a lead member of an international team of researchers at 4D LABS, a new $35-million SFU research facility designed to speed the commercialization of advanced materials and nano-scale devices.

Dr. Peter Zandstra
Stem Cell Bioengineer
University of Toronto

Dr. Zandstra has pioneered the ability to grow stem cells in tissue culture "bioreactors" – vessels wherein the cells' environment is tightly regulated. These are proving key to the production of clinically useful numbers of these cells.

Peter Zandstra

Central to his approach has been the creation of detailed computational models of stem cell growth and differentiation, the process by which a stem cell matures into its final adult form.

He invented a technique in which the differentiation of embryonic stem cells is closely controlled by growing them in bioengineered hydrogel microcapsules.

Dr. Zandstra's NSERC Steacie Fellowship will enable his impressive 15-person lab to take the critical next step of moving their research from mouse embryonic stem cells to human ones.

Andrew White

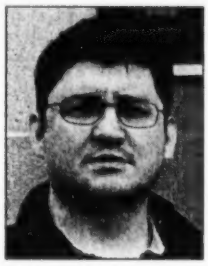
Dr. Andrew White
Viral Biochemist
York University

Dr. White's lab is pioneering the identification and characterization of functional RNA sub-units in the Tomato bushy stunt virus, a positive-strand RNA virus. This virus is part of a family that includes the largest group of crop-damaging viruses as well as such human pathogens as the SARS coronavirus and the Hepatitis C virus. He's shown that specific unique sections of RNA, called viral riboregulators, play central roles in controlling key viral processes.

(continued on page 5)

Continued from page 4

Dr. White believes that the uniqueness of these riboregulators makes them ideal targets for inhibiting viral infections. In continuing his search for new riboregulators during his Steacie Fellowship, he will move towards his ultimate goal: to use bioengineering to manipulate and control riboregulators so that certain viral processes can be refocused to beneficial applications.



Roberto Abraham

Dr. Roberto Abraham
Observational Astrophysicist
University of Toronto

Dr. Abraham is a leading player in using the latest ground and space-based telescopes to study the origin and evolution of galaxies. In 2004, he used the Gemini Telescope in Hawaii, to capture images of the most distant massive galaxies ever seen – peering back 10.3 billion years. The initial results of this Gemini Deep Deep Survey (GDDS), an international collaboration, redefined our understanding of the formation of the earliest galaxies. The GDDS' success relied on a radical new telescope technique which Dr. Abraham's team implemented in partnership with scientists at NRC's Herzberg Institute for Astrophysics.

As a Steacie Fellow, Dr. Abraham hopes to develop a new technique for the Gemini telescope to capture light from the birth of the very first galaxies 300 to 400 million years following the Big Bang.

Dr. Jacques Marchand
Concrete Engineering
Université Laval

Dr. Marchand's lab has developed the world's leading computational tools for the prediction of the service life of concrete structures. The main tool is STADIUM, a mathematical model for calculating the impact of chemical corrosion on concrete structures. The model is being used to estimate the service life of structures around the world, including many ocean-front ones owned by the U.S. Navy.

Jacques Marchand

Through Groupe SEM, a successful 25-person Université Laval-related civil engineering consulting R&D group of which Dr. Marchand is president, he's now developing SUMMA, a computational model to predict the impact of freeze-thaw cycles on concrete durability.

His Steacie research will include improving STADIUM to predict if chemicals penetrating into concrete will lead to cracking.

NSERC Howard Alper Postdoctoral Prize Winner

Dr. Annick Gauthier
Biochemistry and Molecular Biology
University of British Columbia

Dr. Annick Gauthier is studying the biochemistry of the Hepatitis C virus and its interaction with its host cell in the virology lab of Dr. Charles Rice, an internationally acclaimed researcher, at The Rockefeller University. Her Ph.D. research was with microbiologist Dr. Brett Finlay at the University of British Columbia.

Annick Gauthier

NSERC Doctoral Prize Winners

Dr. Patrick Seale
Department of Biology
McMaster University

Dr. Seale's thesis research, with supervisor Dr. Michael Rudnicki, focused on the *Pax7* gene and its role in muscle satellite cell development and regeneration, including the discovery of the first physiological role for adult stem cells in muscle repair. Dr. Seale is presently a postdoctoral fellow at the Dana-Farber Cancer Institute in Boston.

Dr. Vida Dujmovic
School of Computer Science
McGill University

The algorithms and mathematical techniques in Dr. Dujmovic's thesis research, with Dr. Sue Whitesides, solved several longstanding problems in the 2-D and 3-D geometric representation of complex graphs. The insights have applications in fields from mechanical engineering to integrated circuit design.

Dr. Bradley John Siwick
Physics
University of Toronto

Dr. Siwick's thesis research produced the first ever "molecular movie" of atoms in a solid-to-liquid phase transition. The research, with supervisor Dr. R.J. Dwayne Miller, was a cover story in *Science*. Dr. Siwick is presently at the Institute for Atomic and Molecular Physics in Amsterdam.

Dr. Peyman Servati
Electrical and Computer Engineering
University of Waterloo

Dr. Servati's thesis research, with supervisor Dr. Arokia Nathan, produced the first thin-film transistor circuits capable of withstanding substrate bending, a significant step on the way to large area flexible electronics. Dr. Servati is presently a senior research scientist at IGNIS Innovation Inc.

Atlantic Regional Office Advisory Committee Holds First Meeting

Established to work as a catalyst to bring all the funding groups and agencies together to promote and enhance the development of research, training and innovation in the natural sciences and engineering in Atlantic Canada, NSERC's Atlantic Regional Office (ARO) Advisory Committee held its first meeting in Moncton, New Brunswick, on February 9.

The morning session included an overview of the operational plan for the ARO and of the upcoming ARO workshop series. Discussions in the afternoon focused on the Intellectual Property Mobilization Program (a joint NSERC, SSHRC and CIHR initiative), an Industry Canada study on university-industry interactions in non-metropolitan areas, and an overview of upcoming events.

"I was pleased with the level of interest and support people showed for our first meeting," says Yves Gagnon, Visiting Executive for the ARO. "We received feedback on the direction and activities planned, especially with regards to our upcoming workshops."

The aim of the workshops is to raise awareness of NSERC's funding programs, especially the Research Partnerships Programs, and to identify opportunities for university-industry partnerships that will result in proposals from Atlantic Canada.

The committee is composed of research administrators from Atlantic universities and representatives from provincial and federal departments and community colleges. "The creation of the committee was suggested during the consultations we carried out before the ARO was established. Although people have different backgrounds and perspectives, they worked very well together," says Danielle Ménard, Director, Development of Regional Offices.

Shown during the lab visits are (from left to right): Pandurang Ashrit, Thin Films and Photonics Research Group at the Université de Moncton, Serge Michaud, NB Training & Development, Sara Jane Snook, Atlantic Research Commercialization Network (ARCN), Danielle Ménard, NSERC, Katherine Schultz, UPEI, Joanne Gallivan, UCCB, Denis McIntyre, U de Moncton.

After the meeting, members were invited to visit several labs in the Department of Physics and Astronomy at the Université de Moncton.

New Chairholders Database Launched on NSERC's Web Site

On Thursday, March 3, the new **NSERC Chairholders Database** was unveiled.

The database holds over 90 current profiles of NSERC-funded Chairs. Each profile briefly outlines the research or activities being undertaken, lists the partnering organizations, and includes a photo of the Chairholder. Before the end of the summer, more profiles will be added.

There are two easy-to-use search options offered. The *alphabetical search* is designed for those who know the first letter of a Chairholder's or partnering organization's name; while the *detailed search* is intended for those interested in more general criteria, such as identifying Chairholders who have expertise in a particular area, are located within a specific region of the country, or work at a particular university, etc. The tool should prove useful to prospective collaborative partners and many others.

Please explore the database today by visiting www.nserc.gc.ca/partners/chairs_e.asp and let us know what you think. We look forward to hearing from you!

Reps Meet in Ottawa

NSERC Representatives held their annual meeting in Ottawa on January 24, 2005. These are university- or college-appointed volunteers who work with their institution and NSERC to ensure an NSERC presence in the local community.

During the morning session, Reps were brought up to date on important developments at NSERC. Dr. Tom Brzustowski began the session with a presentation entitled "A Strategic Vision of NSERC," and senior staff in Research Grants and Scholarships, Research Partnerships, and eBusiness provided updates in their areas.

In the afternoon discussion sessions, Reps reported on their activities, which ranged from holding celebrations for grant-holders having 25 years' NSERC funding, to arranging lab visits for federal Members of Parliament, to holding networking breakfasts for researchers and the local business community.

The day concluded with the presentation of a "toolkit" of information for use by the Reps, and a tutorial on the use of the newly developed NSERC Rep extranet.

NCE Program Celebrates 15th Anniversary With Tribute to Its Young Innovators

The Networks of Centres of Excellence (NCE) program celebrated its 15th anniversary at its annual meeting in Ottawa on December 3. The theme of the meeting was "Knowledge and Innovation for a Better Life," and representatives of 21 NCEs attended.

To underscore the impact that the NCEs have had in promoting research over the past 15 years, the program secretariat, in cooperation with the networks, created a Young Innovators Award for former NCE students with the most successful technology transfers.

Awards were presented to three winners by the Honourable Jerry Pickard, Parliamentary Secretary to the Minister of Industry:

- Jolanda Cibere, Arthritis Research Centre of Canada in Vancouver, developed a standardized knee exam for early detection of osteoarthritis that has since become part of the clinical standard used by the National Institutes of Health in the United States. She is currently developing a clinical tool for detecting osteoarthritis at an even earlier stage.
- Mohamed M. Hafed, DFT Microsystems Inc. of Montreal, reduced the size of the devices traditionally used to test semiconductors, enabling the devices to be embedded in a microchip. DFT Microsystems Inc. speeded up the process by reducing manufacturing costs.
- Monisha Scott, Inimex Pharmaceuticals Inc. of Vancouver, was one of the key figures in the creation of three biotechnology companies, including Inimex Pharmaceuticals Inc. She was named one of the world's top 100 innovators under the age of 35 by the prestigious US scientific journal *MIT Technology Review*.

Jolanda Cibere, Canadian Arthritis Network, Young Innovators Award Winner, and the Honourable Jerry Pickard, Parliamentary Secretary to the Minister of Industry.

Collaborative Health Research Projects – Program News

Once again, NSERC and CIHR have seen strong growth in the number of applications to the Collaborative Health Research Projects program (up 43 per cent since last year). Seventeen grants were awarded, for a success rate of just under 11 per cent.

The new projects covered a variety of multidisciplinary areas: from testing a new hearing aid processing strategy for children, integrating expertise from audiology, engineering, psychology and speech language pathology, to the development of novel approaches for the cryopreservation of cells using computer simulation to study advanced thermodynamic models.

Given the high demand for this program, we are requiring those interested in the 2006 competition to submit a Notification of Intent to Apply for a CHRP grant (Form 182), by **May 2, 2005**. Those invited to submit full proposals will be notified in late July (for a submission deadline of October 1).

For more CHRP program news, visit the Grants Programs section of the Program Guide for Professors, at www.nserc.gc.ca/index.htm.

Is There a Strategic Grant in Your Future? April 15 Is Fast Approaching!

There are so many ways that research can make a difference to Canadians. The NSERC Strategic Project Grants program supports projects that enhance research and training in a number of emerging and carefully targeted areas of national importance.

This year, NSERC hopes to award more than $10 million for projects on such diverse topics as protein engineering, urbanization, greenhouse gas mitigation, optical memory, and virtual manufacturing. But these are only a few examples of topics eligible for accelerated research and training. Visit our Web site to see the full spectrum of possible project themes within the categories of Biosciences, Environment and Sustainable Development, Information and Communications Technologies and Value-Added Products and Processes (www.nserc.gc.ca/index.htm, under For Professors, Partnership Programs).

Although a cash contribution from partners is not required, their engagement in the project is key to a successful application. Your proposal will also be rated on their capacity to apply results for the benefit of Canada.

Contact a Strategic Program Officer for further information about the competition.

eBusiness Update

affairs ebusiness

The Common CV Team Receives Award

On February 15, representatives of the Common CV team from NSERC, SSHRC, CIHR, and CANTOR (an umbrella group of Quebec granting agencies) were on hand to receive an award from *CIO Government Review*, North America's premier e-government publication. The team won the Bronze CGR e-Government Award in the category called "Executing the Vision Inter-jurisdictionally." The awards recognize cooperation and synergy among two or more levels of government in providing service delivery to citizens.

Hats off to the Common CV team!

Shown accepting the award on behalf of the Common CV team are (from left to right): Kalvin Mercer, Director, Information Systems Division, NSERC/SSHRC; Christiane Villemure, Director, eBusiness Initiative, NSERC, and Chair, Common CV Management Committee; Jacques Crochetière, Chef, Services informatiques, Fonds québécois de la recherche sur la nature et les technologies (FQRNT); Evie Gray, Deputy CIO, CIHR; Nicole Michaud, Project Manager, Electronic Service Delivery, SSHRC; Rosanne Belanger, Project Manager, Common CV Operations Team; David Baker, Project Manager, NSERC/SSHRC; René Durocher, Vice-President, Programs, SSHRC; Mark Bisby, Vice-President, Programs, CIHR, and Chair, Common CV Board of Directors; Robert Parkins, Editor, *CIO Government Review*; Nigel Lloyd, Executive Vice-President, NSERC; and Michael Turner, Assistant Deputy Minister, Information Technology Services, Public Works and Government Services Canada.

On-Line System Update

During the latest application submission period, users of the On-Line System experienced difficulties in attaching, viewing and printing documents and logging into the system. The eBusiness Team is taking steps to guarantee that a reliable and stable system will be in place for next year's peak period.

PromoScience Grants Fund Hands-On Learning Experiences

Forty-six groups across Canada will be receiving NSERC PromoScience grants worth a total of $2.46 million over three years to create imaginative science and engineering programming for young people.

Among the awardees are:

- the Chuntoh Education Society of Fort St. James, which will receive $50,000 for a science program called "Yunk'ut Whe T'so Dul'eh" or "We Learn from Our Land." The program highlights the links between cultural and scientific knowledge, and is based on Dakelh culture: an annual cycle of movement around traditional territories according to the seasonal availability of game and plants; and
- the Alberta Women's Science Network, which encourages girls to pursue interests and ultimately careers in science and engineering. Its Operation Minerva Program provides Grade 8 girls with a day of workshops and job-shadowing with female mentors in science and engineering. The organization will use the $45,000 PromoScience funding to develop a SCIberGIRLS Web site that will feature career and course information, summer camps, science fair information, mottos and advice from female mentors.

"It is exciting to see that even as Promoscience continues to fund large-scale, ongoing programs that are vital to science promotion in Canada, we are also funding new endeavours to engage youth in science, particularly from remote and typically underserved regions," commented panel chair Jodi Asbell-Clarke, a third-year member of the selection panel.

"Showing how science and engineering are interesting and fun is the key to getting our children engaged in learning," said NSERC president Dr. Tom Brzustowski. "The organizations receiving these awards were chosen for their expertise in reaching out to young people, and in many cases, for their focus on groups that are underrepresented in science and engineering." Many of the groups are placing a special emphasis on reaching out to girls and young women, Aboriginal Canadians, and visible minority youth.

The winners were selected in November from among the 114 applications submitted in NSERC's 2004 PromoScience competition.

The list of successful applicants can be found at www.nserc.gc.ca/promoscience/recipients_e.htm.